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JAMES MARC LEAS 37 BUTLER DRIVE S. BURLINGTON, VT 05403			EXAMINER AL HASHEMI, SANA A	
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			2164	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/731,066

Applicant(s)

TOWNSEND ET AL.

Examiner

Sana Al-Hashemi

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26, 28-30, 32, 34, 35, 38-54 and 56-83 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26, 28-30, 32, 34, 35, 38-54 and 56-83 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notices of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This action is issued in response to applicant amendment/ RCE filed 3/31/08.

Claims 1-26, 28-30, 32, 34-35, 38, 39-54, 56-83, are pending. Claims 27, 31, 33, 36-37, 55, and 84 were canceled.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/31/08 has been entered.

#### ***Claim Objections***

Claim 28 is objected to under 37 CFR 1.75(c) as being in improper form because claim 28 depend from claim 77. Correction is required.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-26, 28-30, 32, 34-35, 38, 39-54, 56-83 are rejected under 35 U.S.C. 101 because the claimed invention is non-statutory.

Claims 80-81 as an example these claims define an invention as a whole which encompasses a human being. Inventions which, as a whole, encompass a human being are non-statutory. See MPEP 2105.

Claims 9, and 83-84 as an example: These claims define alternatives where the invention may encompass a human being as whole. (The only "living thing" referenced in the specification are human beings). Accordingly, these claims are non-statutory.

Further more the signal claimed is non-statutory and therefore unpatentable. Applicant is required to correct all the claims with signal, such as claims 1, 39...etc.

Applicant is required to review all the claims for all 101 issues.

### ***Markush Claim***

Claims 1-26, 28-30, 32, 34-35, 38, 39-54, 56-83 are rejected as failing under the Markush-type claim recites alternatives in a format such as "selected from the group consisting of A, B and C." See Ex parte Markush, 1925 C.D. 126 (Comm'r Pat. 1925). The members of the Markush group (A, B, and C in the example above) ordinarily must belong to a recognized physical or chemical class or to an art-recognized class. However, when the Markush group occurs in a claim reciting a process or a combination (not a single compound), it is sufficient if the members of the group are disclosed in the specification to possess at least one property in common which is mainly responsible for their function in the claimed relationship, and it is clear

from their very nature or from the prior art that all of them possess this property. Inventions in metallurgy, refractories, ceramics, pharmacy, pharmacology and biology are most frequently claimed under the Markush formula but purely mechanical features or process steps may also be claimed by using the Markush style of claiming. See MPEP § 2173.05(h). If the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the members of the Markush group in the claim on the merits, even though they may be directed to independent and distinct inventions. In such a case, the examiner will not follow the procedure described below and will not require provisional election of a single species. >See MPEP § 808.02.< Since the decisions in *In re Weber*, 580 F.2d 455, 198 USPQ 328 (CCPA 1978) and *In re Haas*, 580 F.2d 461, 198 USPQ 334 (CCPA 1978), it is improper for the Office to refuse to examine that which applicants regard as their invention, unless the subject matter in a claim lacks unity of invention. In *re Harnisch*, 631 F.2d 716, 206 USPQ 300 (CCPA 1980); and *Ex parte Hozumi*, 3 USPQ2d 1059 (Bd. Pat. App. & Int. 1984). Broadly, unity of invention exists where compounds included within a Markush group (1) share a common utility, and (2) share a substantial structural feature essential to that utility. This subsection deals with Markush-type generic claims which recite a plurality of alternatively usable substances or members. In most cases, a recitation by enumeration is used because there is no appropriate or true generic language. Claims 1- -26, 28-30, 32, 34-35, 38, 39-54, 56-83 discloses " at least one from the group consisting".

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-26, 28-30, 32, 34-35, 38-39, 64-74, 77-79 and 82-84 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 39, 82: Each of the independent claims 1, 39 and 82 have been amended to recite that all the power for the sensing units are derived from the control unit. This feature is not set forth in the original disclosure and therefore constitutes new matter. FIG. 1 clearly illustrates the sensors (22) as drawing power from a battery (36) which is completely separate and distinct from the control unit (50). Even with the understanding that the battery is remotely rechargeable, the fact that a battery (36) outside of the control unit provides the power contradicts the claimed requirement that the control unit provide the sole source of power.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claims 1-26, 28-30, 32, 34-35, 38-39, 64-74, 77-79 and 82-84, the phrase "can" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 50, the term "capable of" renders the claims indefinite, since the term capable of is not definitely performing the step of transmitting and it is only capable of performing the transmitting step. Correction is required in claim 50 and all the claims cite the same term.

Art will not be applied to claims 1-39, and claims 77-79 until the 101, 112 and the Markush rejection is corrected, this in not indication of the claims being allowable.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 40-54, 56-63 and 75-76 are rejected under 35 U.S.C. 102(e) as being anticipated by Agre et al. (U.S. Patent 6,208,247).

Claim 40: Agre et al. discloses a sensing unit (FIG 3). As seen in FIG. 3, the sensing unit comprises one or more sensors (12), a first data storage device (16, 21), a transmitting/receiving device (22-FIG. 9 further illustrates the separate transmitter and receiver devices of the transceiver). Each sensor has an identity (col. 10, line 9) which constitutes an address.

The signals transmitted from the sensing unit can be transmitted to another sensing unit (col. 2, line 43). Thus, another sensing unit can read as the claimed control unit and include a second data transmitting/receiving device (22 in FIG. 3 and FIG. 9) and second data storage device (16, 21). The control unit can send out signals including address information (a frame synch slice, col. 10, lines 30-35 sent to a particular sensing unit which requires address information in the signal). The sensing unit is configured so that a real time signal sent to the sensing unit can trigger a change in data handling (col. 9, lines 42-65, a signal to the microprocessor in the sensing unit can trigger a change to cause increased data acquisition).

Claim 41: The signals transmitted from the sensing unit (FIG. 1) can be transmitted to another sensing unit (col. 2, line 43; col. 5, line 55; col. 11, lines 30-58). Thus, another sensing unit can read as the claimed control unit and include a second transmitter/receiver (22) and second data storage devices (16, 21).

Claim 42: As described with respect to claim 41, the control unit is simply another sensing unit in the network of sensing units. The control unit can send out a frame synch slice (col. 10, lines 30-32) to activate other sensing units. The frame synch slice is readable as address information since it is information sent other nodes (other addresses in the network).

Claim 43: The control unit must inherently provide an address when sending a signal to a destination node to a destination node, such as the signal described with respect to claim 42. The communication sent to destination node reads as a query.

Claim 44: The transmitting/receiving device is (22). Col. 10, lines 30-37 call for each node to transmit data items known as "frame synch slices" so that all of the nodes operate in synchronization. Each node can listen for a frame synch slice (col. 10, line 32) or transmit the



frame synch slice (FIG. 7, steps 92-93). The frame synch slice is a timing signal.

Claim 45: The microprocessor (20) within each sensing unit can activate that sensing unit (col. 3, lines 34-38).

Claim 46: Each node further includes a signal conditioner (17, 80, 19), an A/D converter (14) and a clock (col. 7, lines 40-41).

Claim 47: The first data storage device (16, 21) is connected to the first transmitting device. No patentable weight is attributed to the recited intended use. Claim 48: The transmitters (22) are all wireless transmitters. Claim 49: See FIG. 3, structure (19) for the triggering device.

Claim 50: Agre et al. discloses a sensing unit (FIG 3). As seen in FIG. 3, the sensing unit comprises one or more sensors (12), a first data storage device (16, 21), a transmitting/receiving device (22-FIG. 9 further illustrates the separate transmitter and receiver devices of the transceiver). Each sensor has an identity (col. 10, line 9) which constitutes an address.

The signals transmitted from the sensing unit can be transmitted to another sensing unit (col. 2, line 43). Thus, another sensing unit can read as the claimed control unit and include a second data transmitting/receiving device (22 in FIG. 3 and FIG. 9) and second data storage device (16, 21). The control unit can send out signals including address information (a frame synch slice, col. 10, lines 30-35 sent to a particular sensing unit which requires address information in the signal). The sensing unit is configured so that a real time signal sent to the sensing unit can trigger a change in data handling (col. 9, lines 42-65, a signal to the microprocessor in the sensing unit can trigger a change to cause increased data acquisition).

Claim 54: The microprocessor (20) within each sensing unit can activate that sensing unit (col. 9, lines 42-44). The claim is not limited to all of the recited alternatives, by reason that

they alternatives rather than mandatory features.

Claim 56: See remarks for claim 46.

Claim 57: The microprocessor (20) controls storage in the storage devices (16, 21).

Claim 58: The transmitting/receiving device (22) can transmit data to another node. The other node is readable as the claimed control unit.

Claim 59: The control unit includes second transmitting/receiving device (22) and second storage devices (16, 21) which respectively receive and store data. Claim 60: See remarks for claim 48. Claim 61: See remarks for claim 28-29.

Claim 62: Sensed data can trigger transmissions to other nodes, such as a warning to other nodes (col. 9, lines 42-45). The control unit is one of the other nodes.

Claim 63: Col. 9, lines 61-62 states that the incoming signal (also described at col. 9, lines 42-43) is compared against a threshold profile. The result of the incoming signal can be the transmission of a warning signal to other nodes (col. 9, line 45).

Claim 75: The detection of an incoming signal can trigger the transmission of warning signals to other sensor devices (col. 9, lines 42-45).

### ***Remarks***

Applicant's arguments and amendments have been considered.

Applicant traverses the rejections under 35 USC 101 by pointing to amendments to these claims. The amendments do not overcome these rejections, since the claims under this rejection still encompass a human being as part of the invention.

Applicant argues against the rejection under 35 USC 112, first paragraph by pointing to a quotation in the specification which discusses the battery and establishes that the battery is physically separate from the control unit. The examiner does not dispute the content of this quotation, but finds that it only reinforces the rejection. The rejection of claims 1, 39 and 82 under 35 USC 112, first paragraph was based on an added claim limitation calling for all power for the sensing units to be derived from the control unit. Examiner maintains that power for the sensing units derives from the battery, not the control unit, and applicant's quotation from the specification only reinforces this conclusion. The quotation establishes that power derives from the battery and says nothing about the sensors being powered by the control unit. If anything, the quotation appears to be suggesting the exact opposite arrangement, that the battery in the sensors can recharge the control unit, not the control unit recharging or providing power to the battery of the sensors. The rejection under 35 USC 112, first paragraph is maintained.

With respect to the rejections on prior art, applicant argues that claim 40 calls for each sensing unit to have an address, and that the control unit is not capable of communicating with each sensing unit based on its individual address since the units do not have addresses. This argument is not correct. Agre discloses that each sensor has an "identity" which corresponds to an address. Additionally, the control unit can send out signals including address information (a frame synch slice, col. 10, lines 30-35 sent to a particular sensing unit which requires address information in the signal).

Applicant argues that Agre deploys "internal I/O addressing" and further alleges that such an addressing arrangement is not consistent with claim 40. However, these arguments are self-contradictory, since the previous arguments made by applicant held that Agre had no address

arrangement at all, now applicant is admitting the presence of at least an "internal address" for each sensing unit. Additionally, the claims provide no discussion about the nature of the address itself, so the "internal I/O addressing" admitted by applicant to exist in Agre would not distinguish from the content of claim 40 in its present form.

Applicant also argues that Agre does not disclose a real time signal from the control unit to the sensing unit. However, these arguments are speculative. Agre does not suggest any time lag when sending signals between any of the network nodes, and assuming the presence of such time lag when the prior art does not disclose such time lag means that this conclusion is inconsistent with the Agre reference.

#### ***Point of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sana Al-Hashemi whose telephone number is 571-272-4013. The examiner can normally be reached on 8Am-4:30Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Ronces can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sana Al-Hashemi/  
Primary Examiner, Art Unit 2164